

FIG 1

200~

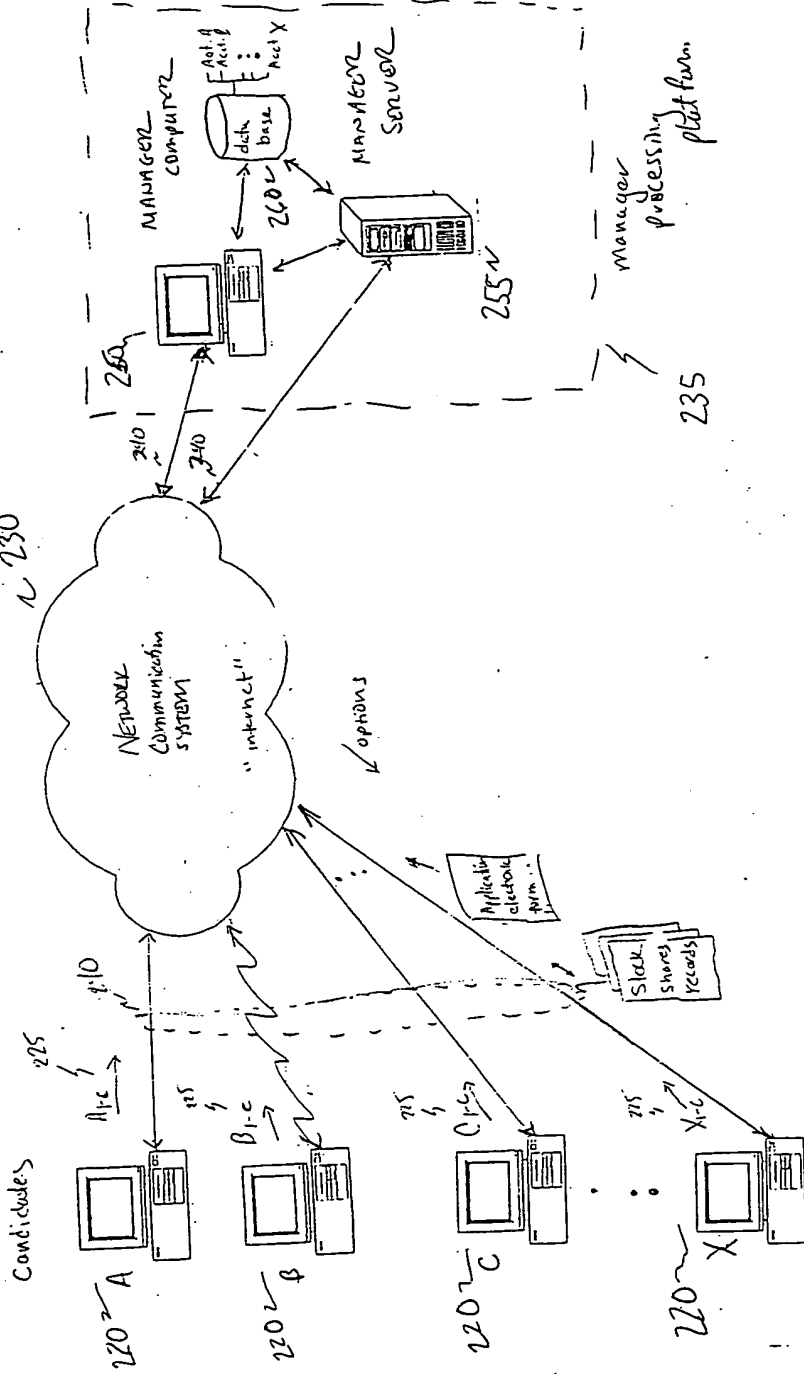


FIG 2

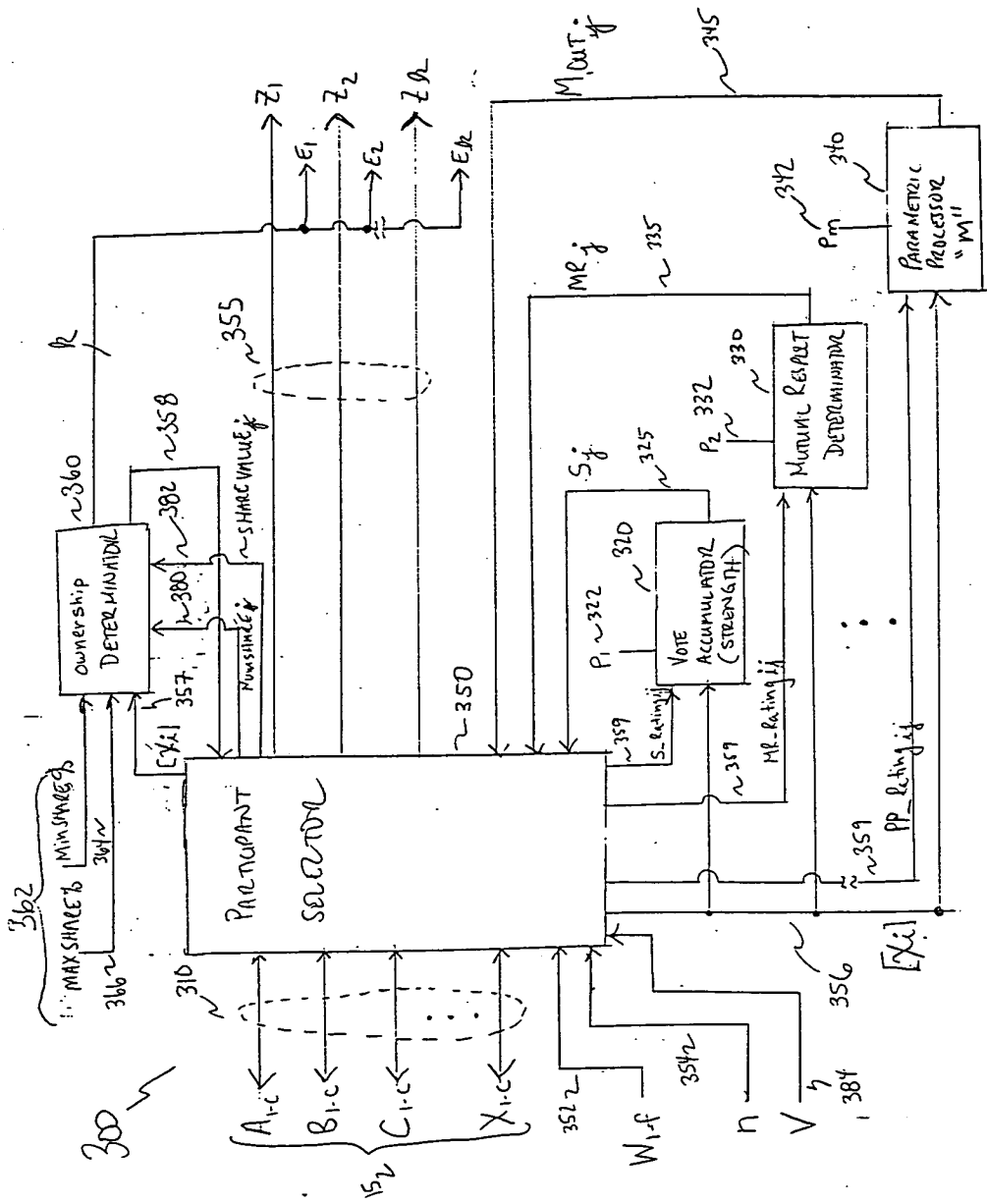


FIGURE 3

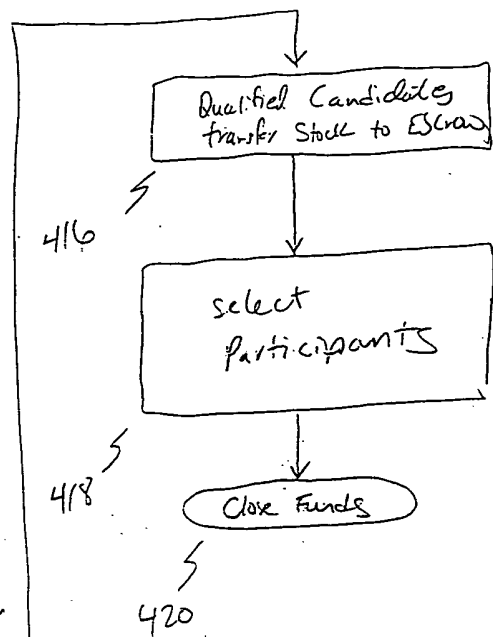
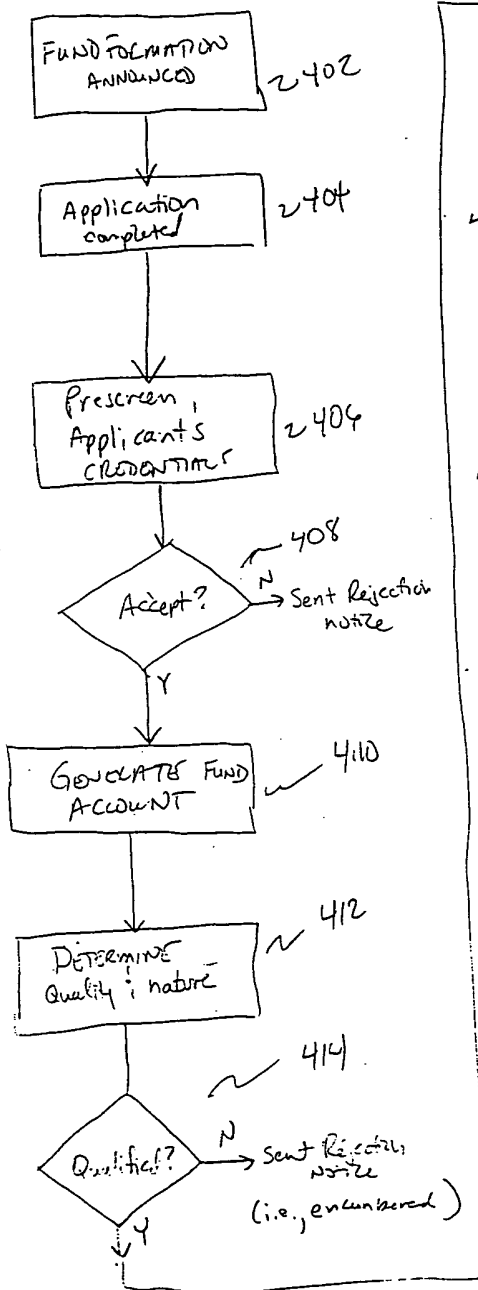


Fig 4

$$S_{ij} = \begin{vmatrix} \circ & S_{Rating_{12}} & S_{Rating_{13}} & \dots & S_{Rating_{1n}} \\ S_{Rating_{21}} & \cdot & \cdot & \cdot & \cdot \\ S_{Rating_{31}} & \cdot & \cdot & \cdot & \cdot \\ \vdots & \cdot & \cdot & \cdot & \cdot \\ S_{Rating_{N1}} & \cdot & \cdot & \cdot & \circ \end{vmatrix} \quad \sim 505$$

$$MR_{ij} = \begin{vmatrix} \circ & MR_{Rating_{12}} & \dots & MR_{Rating_{1n}} \\ MR_{Rating_{21}} & \cdot & \cdot & \cdot \\ MR_{Rating_{31}} & \cdot & \cdot & \cdot \\ \vdots & \cdot & \cdot & \cdot \\ MR_{Rating_{N1}} & \cdot & \cdot & \cdot & \circ \end{vmatrix} \quad \sim 40$$

$$X_{\lambda} = \begin{vmatrix} x_1 & x_2 & x_3 & x_4 & \dots & x_n \end{vmatrix} \sim 515.$$

Fig 5

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graph TD
    610[Select Population Samples] --> 620(Randomly Generate 1st. population sample)
    610 --> 624(Randomly Generate pth population sample)
    620 --> 630[Evaluate Fitness of each population sample]
    624 --> 630
    630 --> 640[Generate new population sample]
    640 --> 650[Select 2 parents from a population according to their fitness]
    650 --> 630
    650 --> 655[Perform Cross-over]
    655 --> 665[Determine fitness of New Population Sample (Offspring)]
    655 --> 660[Perform Mutation]
    660 --> 665
    665 --> 670[Place Offspring in population (May depend on fitness)]
    670 --> 675{Optimum Solution?}
    675 -- No --> 685{Iterate}
    675 -- Yes --> 680{Tentative Participant meets Target Range?}
    680 -- No --> 685
    680 -- Yes --> 690[Terminate]
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The flowchart illustrates a genetic algorithm for participant selection. It begins with a rectangular box labeled "Select Population Samples" (610). This box has two arrows pointing to rounded rectangular boxes: "Randomly Generate 1st. population sample" (620) and "Randomly Generate p<sup>th</sup> population sample" (624). Both 620 and 624 have arrows pointing to a rectangular box labeled "Evaluate Fitness of each population sample" (630). From 630, an arrow points to a rectangular box labeled "Generate new population sample" (640). From 640, an arrow points to a rounded rectangular box labeled "Select 2 parents from a population according to their fitness" (650). From 650, an arrow points back to 630, and another arrow points to a rounded rectangular box labeled "Perform Cross-over" (655). From 655, an arrow points to a rectangular box labeled "Determine fitness of New Population Sample (Offspring)" (665). From 655, another arrow points to a rounded rectangular box labeled "Perform Mutation" (660), which then points to 665. From 665, an arrow points to a rectangular box labeled "Place Offspring in population (May depend on fitness)" (670). From 670, an arrow points to a diamond-shaped decision box labeled "Optimum Solution?" (675). From 675, a "No" path leads to a rounded rectangular box labeled "Iterate" (685), which then loops back to the arrow between 640 and 650. A "Yes" path from 675 leads to another diamond-shaped decision box labeled "Tentative Participant meets Target Range?" (680). From 680, a "No" path leads to 685. A "Yes" path from 680 leads to a rounded rectangular box labeled "Terminate" (690).

FIG 6